### Variable Capacitance Diodes

# **MA27V07**

# Silicon epitaxial planar type

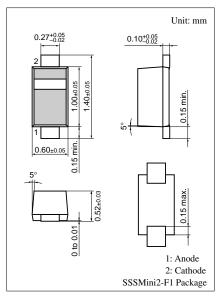
#### For VCO

#### ■ Features

- $\bullet$  Good linearity and large capacitance-ratio in  $C_D V_R$  relation
- High frequency type by this low capacitance
- SSS-Mini type package, allowing downsizing of equipment and automatic insertion through the taping package

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	$V_R$	6	V
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C



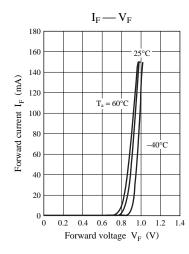
Marking Symbol: 7

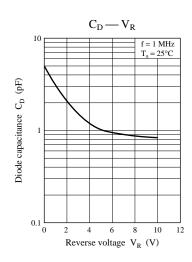
## ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

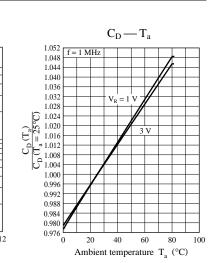
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Reverse current (DC)	$I_R$	$V_R = 5 V$			10	nA
Diode capacitance	C <sub>D(1V)</sub>	$V_R = 1 \text{ V, } f = 1 \text{ MHz}$	2.88		3.12	pF
	C <sub>D(3V)</sub>	$V_R = 3 V, f = 1 MHz$	1.49		1.62	
Capacitance ratio	C <sub>D(1V)</sub> /C <sub>D(3V)</sub>		1.84		2.02	_
Series resistance *	$r_{\mathrm{D}}$	$V_R = 3 \text{ V, f} = 470 \text{ MHz}$			0.35	Ω

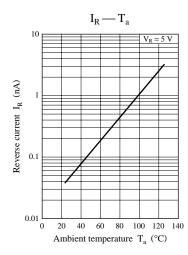
Note) 1. Rated input/output frequency: 470 MHz

<sup>2. \*:</sup> Measuring instrument; YHP MODEL 4191A RF IMPEDANCE ANALYZER









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